

# PATENT SPECIFICATION

DRAWINGS ATTACHED

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## COMPLETE SPECIFICATION

### Combined Toothbrush and Tooth Cleansant Injector

- We, ERIC JOHN HOSIE, 21, Highfield Drive, Clarkston, Renfrewshire, and JOHN LOGAN ANDREW, 63, Crosslees Drive, Thornliebank, Renfrewshire, (both British), do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—
- 10 The appliance described herein shall be intended solely for the cleaning of natural teeth and shall expressly exclude its use for the cleaning of dentures or artificial teeth.
- 15 The toothbrush which forms the subject of this invention shall consist of a brush-head and neck, the handle of which shall be a container filled or fillable with tooth-paste, liquid tooth cleaner, mouth wash, or in fact with any liquid or semi-liquid, including water, or with any powder or liquid or tablet additive to water, or any cream, or in fact any cleansant material of any nature whatsoever.
- 20 The cleansant material shall be delivered via the neck by means of a duct or multiplicity of ducts and discharged into or among the bristles either by an orifice or multiplicity of orifices or a jet or multiplicity of jets in the material of the brush-head or by hollow bristles.
- 25 The container which forms the handle of the appliance shall be detachable by means of a screw coupling. The handle or container, which may be refillable or expendable, shall consist of a compressible or collapsible tube or bulb, by which means a supply of cleansant material can be forced through the duct or multiplicity of ducts to the brush-head and there be discharged by the orifice or multiplicity of orifices or jet or multiplicity of jets as described heretofore.
- 30 The compressible or collapsible tube employed in forming the handle of the appliance in order to form a suitable and rigid handle is thickened over half the circumference.
- 35 In the accompanying drawings Fig. 1 represents the brush-head and neck, and Fig. 2 the container or handle. Fig. 1 represents the brush-head and neck in longitudinal section, plan, and in three vertical cross sections throughout its length. (a) is a female screw which is to be of such a pitch and size as will match up with the male thread (g) on the container as shown in Fig. 2, or, alternatively, of any other pitch or size if the brush-head and neck are designed for use with a different type of container. (b) represents the duct, whose diameter shall be regulated by the particular viscosity of the cleansant material which it is designed to conduct, passing up the neck of the brush, behind the first three centre bristles and finally emerging at the opening (c). As in the case of the duct the size of the orifice (c) shall be regulated by the viscosity of the cleansant material used, or, for which any particular brush or batch of brushes is designed, and may vary from a fine jet to an orifice of similar bore to the duct itself. The external diameter or form of the neck shall be of a minimum consistent with providing sufficient mechanical strength to support the head in use. At (d) are indicated the sockets designed to take the bristles. The raised or thickened portion of the head at (e), which accommodates the first three centre bristles and the orifice (c), and behind which the duct (b) passes, is provided to give additional depth of material to permit the satisfactory socketing of the three bristles aforesaid to be carried out. The extent to which it will be necessary to raise this portion (e) will depend on the diameter of the duct, but should be kept to a minimum and the edges shall be smooth and slightly rounded off so as to present a nonragged edge

in event of the bristles becoming worn.

Fig. 2 represents the handle or container in longitudinal and vertical cross section. This container is made of polythene or some similar substance and constitutes a compressible tube. The lower longitudinal part of the circumference is thickened as indicated at (f) to provide a satisfactory handle and the remainder of the tube is of such thickness that it may be compressed to eject the contents. (g) is a nozzle with a male screw designed to fit the female socket (a) in Fig. 1.

In so far as is practicable the screw threads at (a) and (g) should so axially relate one to the other that, when both parts of the appliance are united, the thickened portion of the

contained (f) and the bristled face of the head are in line.

#### WHAT WE CLAIM IS:—

A toothbrush for the cleaning of natural teeth having a ducted head and neck with an orifice or orifices or a jet or jets between the bristles of the head, in combination with a compressible bottle container, detachable from the head and holding cleansant material, and having one side thereof thickened over half the circumference substantially as herein described with reference to the accompanying drawing.

ERIC J. HOSIE.  
J. L. ANDREW.

#### PROVISIONAL SPECIFICATION No. 43952, A.D. 1959.

##### Combined Toothbrush and Toothpaste Injector

We, ERIC JOHN HOSIE, 21, Highfield Drive, Clarkston, Renfrewshire, and JOHN LOGAN ANDREW, 63, Crosslees Drive, Thornliebank, Renfrewshire, (both British), do hereby declare this invention to be described in the following statement:—

The toothbrush shall consist of a brush-head and neck, the handle of which shall be a container filled or fillable with toothpaste which shall be delivered, via the neck, by means of a duct or ducts and discharged into or among the bristles of the brush-head either by means of an orifice or orifices in the material of the said brush-head or by hollow bristles or by any other means. The container which constitutes the handle or any part of the handle of the appliance shall be,

either, an integral part of the brush-head and neck, permanently attached thereto, or, alternatively, detachable by means of a screw-coupling, bayonet-fixing, push-fit-joint, or similar means of union. The handle or paste container of the appliance shall consist of a cylinder with piston, actuated, by spring-loaded press-button and plunger, or by screw and plunger, or, alternatively, shall consist of either a collapsible or compressible tube, by each or any of which means a supply of toothpaste may be forced through the duct or ducts to the brush-head.

ERIC J. HOSIE.  
J. L. ANDREW.

#### PROVISIONAL SPECIFICATION No. 18968, A.D. 1960.

##### Combined Toothbrush and Tooth Cleansant Injector

We, ERIC JOHN HOSIE, 21, Highfield Drive, Clarkston, Renfrewshire, and JOHN LOGAN ANDREW, 63, Crosslees Drive, Thornliebank, Renfrewshire, (both British), do hereby declare this invention to be described in the following statement:—

The toothbrush shall consist of a brush-head and neck, the handle of which shall be a container filled or fillable with liquid tooth cleaner, mouth-wash, or in fact with any appropriate liquid or semi-liquid including water, or with any powder, liquid or tablet additive to water. The cleansant material shall be delivered via the neck by means of a duct or multiplicity of ducts and be discharged into, among or through the bristles either by means of a jet or multiplicity of jets in the material of the brush-head or such like means. The container which constitutes the

handle or any part of the handle of the appliance shall be, either, an integral part of the brush-head and neck, permanently attached thereto, or, alternatively, detachable by means of a screw-coupling, bayonet fixing, push-fit-joint or any other such like or similar means of union. The handle or container of the appliance shall consist of a cylinder with piston, actuated by spring loaded press-button and plunger, or by screw and plunger, or, alternatively, shall consist of either a collapsible or compressible container, or a pressurised container, by each or any of which means a supply of cleansant material may be forced through the duct or ducts to the brush-head and there be discharged by the jet or multiplicity of jets as described heretofore.

Reference is made to our Provisional Specification No. 43952/59 with which the device

described herein may be the subject of consolidation, or, alternatively either may be proceeded with separately and in its own right.

ERIC J. HOSIE.  
J. L. ANDREW.

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COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of  
the Original on a reduced scale*

FIG. 1.

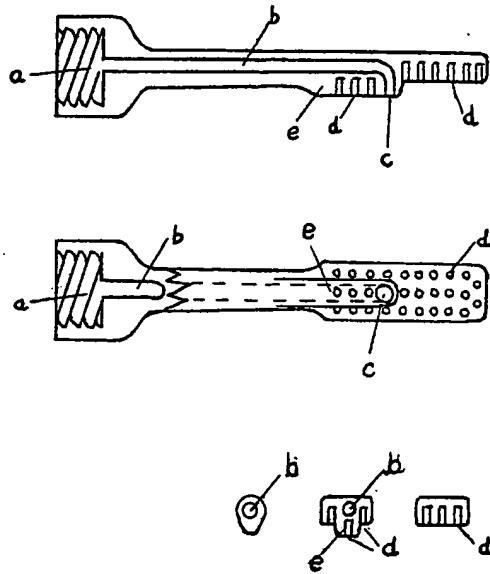


FIG. 2.

